Tennessee Department of Environment and Conservation,
Division of Water Pollution Control
401 Church Street, 6th Floor L & C Annex, Nashville, TN 37243
(615) 532-0625

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CONCENTRATED ANIMAL FEEDING OPERATION (CAFO)
STATE OPERATING PERMIT (SOP)
NOTICE OF INTENT (NOI)

Type of permit you are requesting: ☐ SOPCD0000 (designed to discharge) ☐ SOPC00000 (no discharge) ☐ Unknown, please advise

Application type: ☐ New Permit ☒ Permit Reissuance ☐ Permit Modification

If this NOI is submitted for Permit Modification or Reissuance provide the existing permit tracking number: SOPC 0000

OPERATION IDENTIFICATION

Operation Name: Robert Wilson A+B Poultry	County: Greene
Operation Location/ Physical Address: 2338 Charlie Doty Rd.	Latitude:
	Longitude:
Name and distance to nearest receiving water(s): Lick Creek 2000'	
If any other State or Federal Water/Wastewater Permits have been obtained for this site, list those permit numbers:	
Animal Type: ☒ Poultry ☐ Swine ☐ Dairy ☐ Beef ☐ Other ____	
Number of Animals: 92,000 Number of Barns: 4 Name of Integrator: Koch Foods	
Type of Animal Waste Management: (check all that apply) ☒ Dry ☐ Liquid ☐ Liquid, Closed System (i.e. covered tank, under barn pit, etc.)	
Attach the NMP ☐ NMP Attached Attach the closure plan ☐ Closure Plan Attached Attach a topographic map ☐ Map Attached	

PERMITTEE IDENTIFICATION

Official Contact (applicant): Robert E. Wilson	Title or Position: Owner			
Mailing Address: 2338 Charlie Doty Rd	City: Greeneville	State: TN	Zip: 37745	☐ Correspondence ☐ Invoice
Phone number(s): 423 234 0271	E-mail: Wilfarm@century link.net			
Optional Contact:	Title or Position:			
Address:	City:	State:	Zip:	☐ Correspondence ☐ Invoice
Phone number(s):	E-mail:			

APPLICATION CERTIFICATION AND SIGNATURE (must be signed in accordance with the requirements of Rule 1200-4-5-.05)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and title; print or type	Signature	Date
Robert E. Wilson owner	Robert E Wilson	6-13-2011

STATE USE ONLY

Received Date	Reviewer	EFO	T & E Aquatic Fauna	Tracking No.
	Impaired Receiving Stream	High Quality Water		NOC Date

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Animal Type: ☒ Poultry ☐ Swine ☐ Dairy ☐ Beef ☐ Other ____

Number of Animals: 92,000	Number of Barns: 4	Name of Integrator: Koch Foods

Type of Animal Waste Management: (check all that apply)
☒ Dry
☐ Liquid
☐ Liquid, Closed System (i.e. covered tank, under barn pit, etc.)

Attach the NMP ☐ NMP Attached	Attach the closure plan ☐ Closure Plan Attached	Attach a topographic map ☐ Map Attached

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Name and title; print or type	Signature	Date
Robert E. Wilson owner	Robert E Wilson	6-13-2011

STATE USE ONLY

Received Date	Reviewer	EFO	T & E Aquatic Fauna	Tracking No.
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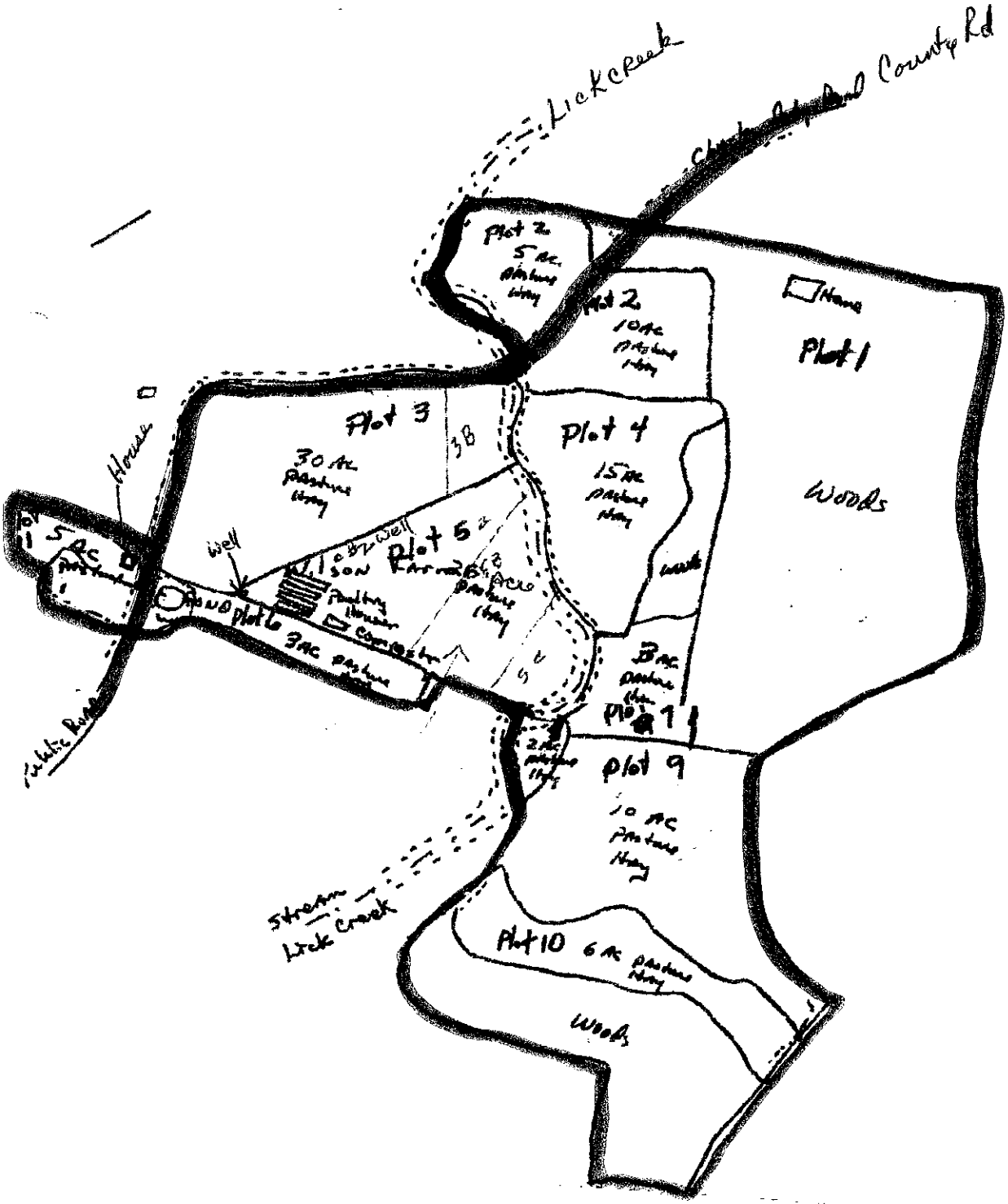
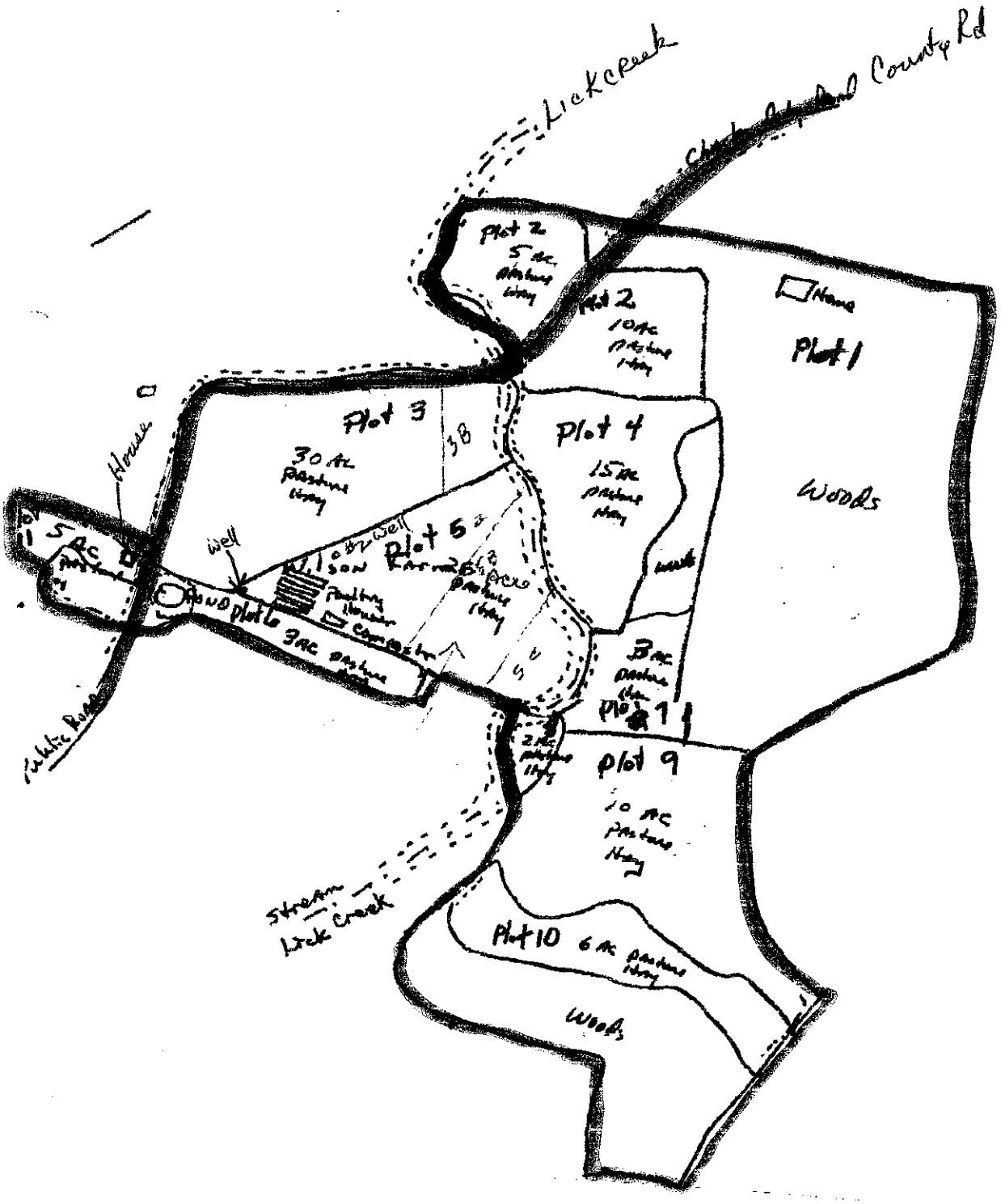
Buffer Area .....

Stream .—•—.—.—.



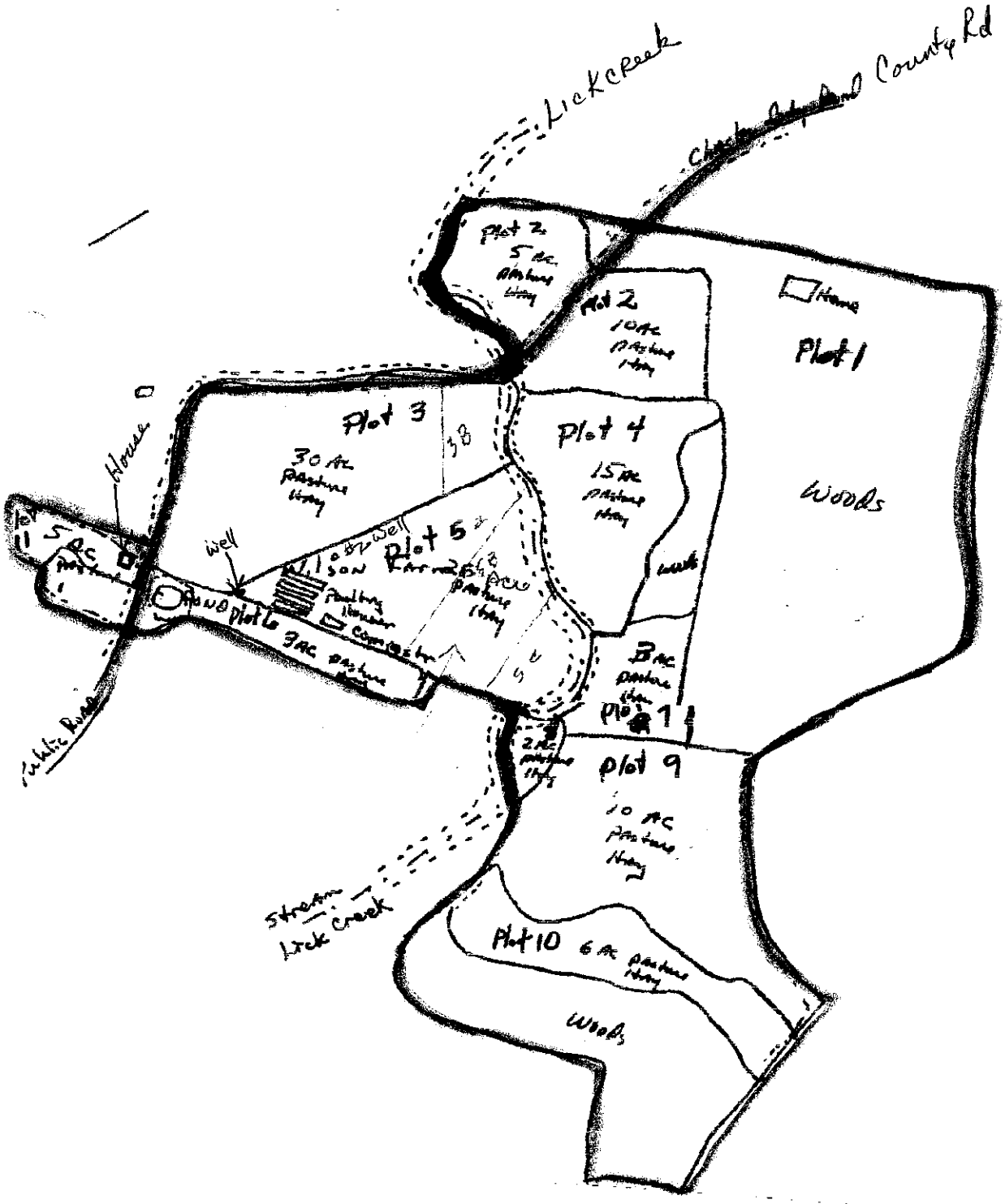
Buffer Area .....

Stream .—.—.—.—.



Buffer Area .....

Stream .—•—.—.—.



Nutrient Management Plan
for
A & B Poultry
Robert E. Wilson
2338 Charlie Doty Road
Greeneville, Tenn.

Phone 423 234 0271

County: Greene

Type of Operation: Broiler

Size of Operation: 92,000 birds per growout, 6 growouts per year.

Date 6-19-2011

Robert E. Wilson
Producer Signature

6-19-2011
Date

Summary

The A & B poultry operation is a 4 house broiler operation in Greene County in East Tennessee. It has a capacity of 92,000 birds per growout, with 6 growouts per year for a total capacity of 552,000 birds per year.

Litter will be surface applied according to recommendation made in the table below.
Table 1

Field #	Acres	Crop	Litter Rate/Acre	Litter Rate/Field
Plot	3	Pasture	1.3	3.9
Plot 2	15	Hay	1.6	24
Plot 3	30	Hay & Pasture	0	0
Plot 4	15	Hay & Pasture	2.6**	39
Plot 5	25	Hay & Pasture	2.6**	65
Plot 6	3	Pasture	1.3	3.9
Plot 7	3	Pasture	1.3	3.9
Plot 9	10	Hay & Pasture	2.6**	26
Plot 10	6	Hay & Pasture	2.6**	15.6
Plot 11	5	Pasture	0	0
			Total	181.3

**50% applied in Spring, 50% in F

Total litter usage for these fields (Approximately 182 tons) is far less than the amount produced (480 tons) creating a need for alternate methods of Litter Disposal. The producer is currently marketing litter to other individuals as fertilizer materials. Current annual marketings are as follows:

- 30 loads at 10 tons each =300 tons
- Potential on farm use of 182 tons

Total potential usage and marketings = 482 tons

Litter samples should be collected annually to more accurately determine the nutrient concentrations of the material. Litter should be spring applied on the forage fields and also fall applied for fields that are for hay and pasture.

No litter should be applied within 100 feet of any surface water, drainage ditches or other conveyances that might impact water quality.

Soil tests should be taken a minimum of once every three years to monitor soil pH and check on phosphorus and potassium levels of the soil.

Complete and accurate records will be kept on the application of litter to fields as well as any litter removed from the farm by the owner or third parties. The amount of litter sold or spread on the farm, and in temporary storage will equal the amount of litter produced by the operation and will be reflected in the records kept.

System Description

The A & B Poultry operation is a four house operation with the dimensions of each house being 40' x 400' with a total winter capacity of 23,500 birds each and a summer capacity of 21,000 birds.

Between growouts a housekeeper is utilized to remove the cake from the houses. The houses will only be totally cleaned out when necessary. The litter will be surface applied to fields in the spring prior to spring growth of forages.

Maps of the area where litter will be applied are attached as an appendix to this plan.

Litter Management

The birds are housed on shavings and sawdust which is cleaned between growouts using a housekeeper and litter removed by total house cleanout only when necessary. Litter that cannot be taken directly to the field and land applied will be placed in temporary storage.

The temporary storage facility is 50' x 100' and can be stacked to a depth of 8'. Assuming that the density of litter removed is 32lbs. per cubic foot, it is estimated that this structure is capable of storing in excess of 640 tons of litter.

There are approximately 240 loads of material removed annually from the four houses combined. Each load is 125 cubic feet containing approximately 2.0 tons of litter. Therefore, there are 480 tons of litter to be stored, marketed, or land applied. It is assumed that material removed in the spring, would be immediately land applied.

Mortality Management

Mortalities are handled by composting in bins as part of the litter storage building for birds up to 4 weeks of age. Birds more than 4 weeks of age are buried in an approved manner.

Litter and Soil Analyses

Litter analysis was done in February of 2005 and the results are reported in Table 2. The analysis was done at the University of Arkansas diagnostic laboratory and a copy is attached. Soil samples were submitted to the University of Tennessee Soil lab and the results are listed in Table 3. Samples are attached.

Table 2 Litter Analysis (lbs. per ton on "as is" basis) and Estimate of Litter Nutrients

Nutrient	Analysis (lbs./ton	Estimate for 4 Houses
Nitrogen	45.6	21,888.0
Phosphorus	40.8	19,584.0
Potassium	37.5	18,000.0

Table 3 Summary of Field Acreages, Soil Test Results, and Rate Recommendations

Field #	Acres	Crop	pH	N Rate	Soil P*	P Rate	Soil K*	K Rate
Plot	3	Pasture	6.3	60	M	30	H	0
Plot 2	15	Hay	6.2	75	VH	0	VH	0
Plot 3	30	Hay & Pasture	6.4	120**	H	0	VH	0
Plot 4	15	Hay & Pasture	5.8	120**	H	0	H	0
Plot 5	25	Hay & Pasture	6.4	120**	L	60	L	60
Plot 6	3	Pasture	5.9	60	H	0	H	0
Plot 7	3	Pasture	7.1	60	L	60	L	60
Plot 9	10	Hay & Pasture	6.8	120**	L	60	H	0
Plot 10	6	Hay & Pasture	7.1	120**	L	60	L	60
Plot 11	5	Pasture	6.3	60	H	0	H	0

Total 115 A

*L=Low M=Medium H=High VH=Very High

Yield Potential for Pasture =3 tons/Acre

**Rate is based on half the application in spring and half in fall

Estimation of Litter Application Rates

Tennessee Natural Resources Conservation Service (NRCS) guidelines for Nutrient Management (Conservation Standard 590) state that manure or litter application rates should be based on either soil test recommendations or a site assessment using the Tennessee Phosphorus Risk Index. Nitrogen based manure application is allowed on sites on which there is a soil test recommendation to apply phosphorus. On sites where there is no recommendation to apply phosphorus, application should be based on the Phosphorus Index (PI) rating. Nitrogen based application is allowed on sites rated as low or medium risks. On sites based as high or very high risks, application based on crop phosphorus rates is allowed.

Based on soil test results, litter can be applied at the nitrogen rate on all fields except samples 2, 3, 4, 6, and 11 which will have the PI applied to them. Application of litter at the nitrogen rate on fields eligible for this rate would utilize approximately app. 114 tons of litter. This application will be split with 50% in the Spring and 50% in the Fall on those samples with a N rate of 120. Samples 2, 3, 4, 6, and 11 would utilize app. 70 tons of litter (Table 4). . Total litter usage for these fields (approximately 184 tons) is less than the amount produced (480 tons) creating a need for alternate methods of Litter Disposal. The producer is currently marketing litter to other individuals as fertilizer materials. Current annual marketings are as follows:

- 30 loads at 10 tons each =300 tons
- Potential on farm use of 182 tons

Total potential usage and marketings = 482 tons

Table 4 Estimated litter use

Field #	Acres	Crop	N Recom	P Recom	Tons per Acre	Tons per Field	N* Basis	P* Basis
Plot	3	Pasture	60	30	1.3	3.9	X	
Plot 2	15	Hay	75	0	1.6	24	X	
Plot 3	30	Hay & Pasture	120**	0	0	0		X
Plot 4	15	Hay & Pasture	120**	0	2.6**	39	X	
Plot 5	25	Hay & Pasture	120**	60	2.6**	65	X	
Plot 6	3	Pasture	60	0	1.3	3.9	X	
Plot 7	3	Pasture	60	60	1.3	3.9	X	
Plot 9	10	Hay & Pasture	120**	60	2.6**	26	X	
Plot 10	6	Hay & Pasture	120**	60	2.6**	15.6	X	
Plot 11	5	Pasture	60	0	0	0		X

*Basis upon which rate was calculated

**Rate is based on half the application in spring and half in fall

Litter Distribution 2011

Plot 1	Plot 2	Plot 3	Plot 4	Plot 5	Plot 6	Plot 7	Plot 8	Plot 9	Plot 10	Plot 11		
											Grow out #1	
	20T										Grow out #2	
			40T								Grow out 3	6/18/2011
											Grow out 4	
											Grow out 5	
											Grow out 6	
											Grow out 7	

AMOUNT OF LITTER REMOVED FROM HOUSES

	House Cleaner Loads 2 Ton Ea.					
	House 1	House 2	House 3	House 4	Date	Totals
GO1						
GO2						
GO3	6 12 T	6 12T	4.5 9T	4.5 9T	18-Jun 2011	42 T
GO4						
GO5						
GO6						
GO7						

LITTER TAKEN FROM FARM

	Brown Farm	Stone Farm	Light Farm
GO 1			
GO 2	578 T		
GO 3		204 T	68 T
GO 4			
GO 5			
GO 6			
GO 7			

Phosphorus Risk Index

Sample = 2 & 3

Part A: Phosphorus loss potential due to site and transport characteristics						
Transport	**Phosphorus Loss Rating**				Sample 2	Sample 3
	(1 point)	*(2 points)*	*(4 points)*	*(8 points)*		
Hydrologic Soil Group (Table 1)	A	B	C	D	**2**	**4**
***Erosion Potential** (Table 2)*	-	Low	Medium	High	**2**	**2**
***Permanent Vegetative Buffer Width** *(ft)*	>29	20-29	10-29	< 10	**1**	**1**
Non-Application Width from Surface Water conveyance (ft)	>29	20-29	10-29	< 10	**1**	**1**
				Part A: Total Site Value:	**6**	**8**

- Permanent Vegetative Buffer must be installed, constructed, and maintained in accordance with applicable NRCS Conservation Practice Standard.

Part B: Phosphorus loss potential due to source and management characteristics						
Source	**Phosphorus Loss Rating**				Sample 2	Sample 3
	(1 point)	*(2 points)*	*(4 points)*	*(8 points)*		
Soil Test P Value	Low	Medium	High	Very High	8	8
P Application Rate ***(lbs/ac/crop or crop sequence/rotation)***	0.20 x _____ lbs P_2O_5 applied as commercial fertilizer 0.10 x 65 lbs P_2O_5 applied as manure, litter, or biosolids Sample 2 0.10 x 106 lbs P_2O_5 applied as manure, litter, or biosolids Sample 3 0.05 x _____ lbs P_2O_5 applied as alum amended poultry litter (applied at a 100 dry lbs per 1000 square feet or 20 gallons liquid alum per 1,000 square feet) 0.02 x _____ lbs P_2O_5 applied as alum amended poultry litter applied at a 200 dry lbs per 1000 square feet or 40 gallons liquid alum per 1,000 square feet)				6.5	10.6
Application Timing	June – Sept.	April, May, Oct., March or Nov. w/ winter cover	March or Nov. w/o winter cover, Feb. w/ winter cover	Dec., Jan., Feb.	2	2
Application Method	Injected/Banded 2" below the surface	Incorporated within 5 days of application	Incorporated more than 5 days after application	Surface applied (no incorporation)	8	8
				Part B: Total Management Value:	24.5	28.6

Total PI rating for Sample 2 is 6 (Part A) X 24.5 (Part B) = 147

The litter application rate for Sample 2 will be based on Nitrogen as this sample is classified at a value of less than 200

Total PI rating for Sample 3 is 8 (Part A) X 28.6 (Part B) = 229

The litter application rate for Sample 3 will be based on Phosphorous as this sample is classified at a value of more than 200

Phosphorus Risk Index

Sample = 4 & 6

Part A: Phosphorus loss potential due to site and transport characteristics						
Transport	**Phosphorus Loss Rating**				Sample 4	Sample 6
	(1 point)	*(2 points)*	*(4 points)*	*(8 points)*		
Hydrologic Soil Group (Table 1)	A	B	C	D	**4**	**4**
***Erosion Potential** (Table 2)*	-	Low	Medium	High	**2**	**2**
Permanent Vegetative Buffer Width *(ft)	>29	20-29	10-29	< 10	**1**	**1**
Non-Application Width from Surface Water conveyance (ft)	>29	20-29	10-29	< 10	**1**	**1**
				Part A: Total Site Value:	**8**	**8**

- Permanent Vegetative Buffer must be installed, constructed, and maintained in accordance with applicable NRCS Conservation Practice Standard.

Part B: Phosphorus loss potential due to source and management characteristics						
Source	**Phosphorus Loss Rating**				Sample **4**	Sample **6**
	(1 point)	***(2 points)***	***(4 points)***	***(8 points)***		
Soil Test P Value	Low	Medium	High	Very High	**4**	**4**
P Application Rate ***(lbs/ac/crop or crop sequence/rotation)***	0.20 x _____ lbs P_2O_5 applied as commercial fertilizer 0.10 x 106 lbs P_2O_5 applied as manure, litter, or biosolids Sample 4 0.10 x 53 lbs P_2O_5 applied as manure, litter, or biosolids Sample 6 0.05 x _____ lbs P_2O_5 applied as alum amended poultry litter (applied at a 100 dry lbs per 1000 square feet or 20 gallons liquid alum per 1,000 square feet) 0.02 x _____ lbs P_2O_5 applied as alum amended poultry litter applied at a 200 dry lbs per 1000 square feet or 40 gallons liquid alum per 1,000 square feet)				**10.6**	**5.3**
Application Timing	June – Sept.	April, May, Oct., March or Nov. w/ winter cover	March or Nov. w/o winter cover, Feb. w/ winter cover	Dec., Jan., Feb.	**2**	**2**
Application Method	Injected/Banded 2" below the surface	Incorporated within 5 days of application	Incorporated more than 5 days after application	Surface applied (no incorporation)	**8**	**8**
				Part B: Total Management Value:	**24.6**	**19.3**

Total PI rating for Sample 4 is 8 (Part A) X 24.6 (Part B) = 197
The litter application rate for Sample 4 will be based on Nitrogen as this sample is classified at a value of less than 200
Total PI rating for Sample 6 is 8 (Part A) X 19.3 (Part B) = 154
The litter application rate for Sample 6 will be based on Nitrogen as this sample is classified at a value of less than 200

Phosphorus Risk Index

Sample = 11

Part A: Phosphorus loss potential due to site and transport characteristics						
Transport	Phosphorus Loss Rating				Sample 11	
	(1 point)	*(2 points)*	*(4 points)*	*(8 points)*		
Hydrologic Soil Group (Table 1)	A	B	C	D	**8**	
Erosion Potential (Table 2)	-	Low	Medium	High	**2**	
*Permanent Vegetative Buffer Width *(ft)*	>29	20-29	10-29	< 10	**1**	
Non-Application Width from Surface Water conveyance (ft)	>29	20-29	10-29	< 10	**1**	
				Part A: Total Site Value:	**12**	

- Permanent Vegetative Buffer must be installed, constructed, and maintained in accordance with applicable NRCS Conservation Practice Standard.

Part B: Phosphorus loss potential due to source and management characteristics						
Source	**Phosphorus Loss Rating**				Sample *11*	
	(1 point)	*(2 points)*	*(4 points)*	*(8 points)*		
Soil Test P Value	Low	Medium	High	Very High	4	
P Application Rate ***(lbs/ac/crop or crop sequence/rotation)***	0.20 x _____ lbs P_2O_5 applied as commercial fertilizer 0.10 x 53 lbs P_2O_5 applied as manure, litter, or biosolids 0.05 x _____ lbs P_2O_5 applied as alum amended poultry litter (applied at a 100 dry lbs per 1000 square feet or 20 gallons liquid alum per 1,000 square feet) 0.02 x _____ lbs P_2O_5 applied as alum amended poultry litter applied at a 200 dry lbs per 1000 square feet or 40 gallons liquid alum per 1,000 square feet)				5.3	
Application Timing	June – Sept.	April, May, Oct., March or Nov. w/ winter cover	March or Nov. w/o winter cover, Feb. w/ winter cover	Dec., Jan., Feb.	2	
Application Method	Injected/Banded 2" below the surface	Incorporated within 5 days of application	Incorporated more than 5 days after application	Surface applied (no incorporation)	8	
				Part B: Total Management Value:	19.3	

Total PI rating for Sample 11 is 12 (Part A) X 19.3 (Part B) = 232
The litter application rate for Sample 11 will be based on Phosphorous as this sample is classified at a value of more than 200

Records

The Following records will be kept:

1. Analysis of representative litter samples collected annually.
2. Estimated volumes and weights of litter removed from each house
3. Rates of litter applied to each field.
4. Litter sold and removed from the farm by the owner and/or third parties.
5. Soil test results collected a minimum of every third year.

Closure Plan

In the event that poultry production ceases at A & B Poultry, the following procedures will be implemented:

1. All poultry will be removed from the operation by the contractor or the grower.
2. All dead poultry will be removed and disposed of by practices outlined in the nutrient management plan.
3. All litter will be removed from the houses and placed in either temporary storage or land applied according to the nutrient management plan.
4. All litter will be removed from the temporary storage as weather conditions allow, and land applied in accordance with the nutrient management plan.